Remarks of

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to the

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Hybrids Workshop

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Good morning. I'm pleased to add my welcome to those of Rita (Bajura) and Joe (Strakey). I'm also pleased to add my personal appreciation to Dick Truly and Bob Dixon for their involvement and support of this workshop.

One of the priorities that Bob and I have discussed frequently – and I know that Rita and Dick have had similar discussions – is the need to bring about a greater cohesion among our programs.

This conference aptly illustrates that the dividing line between fossil and renewable energy technologies is rapidly fading. And emerging in its place is a much more progressive view of the way energy should be produced more efficiently and cleanly in the 21st century.

The collaboration between our two organizations – Energy Efficiency and Renewable Energy, and Fossil Energy – has some personal significance for me. I've worked in both organizations. There are extremely capable individuals in each that believe passionately in their mission. But while healthy competition helps focus our professional energies, I've always believed that when it comes to the energy of the country, we can make a stronger contribution by working toward closer collaboration, rather than promoting rivalry.

I have been asked to place your upcoming discussions on hybrid technologies in the larger context of the President's National Energy Policy. That's the easy part. I've also been asked to provide a status report on what is happening in Washington and what might happen when Congress returns after its August recess. That's a lot tougher – especially the prognostication part.

It would be much easier to predict whether Michael Jordan will be playing for the Washington Wizards this coming season than to predict what 535 Members of Congress will do on any given day – much less several weeks or months into the future. But I can at least summarize where they are today on energy matters.

And actually, the news is quite surprising – especially for an observer like myself who spent 17 years or so working with Congressional Members.

If you would have asked me a few weeks ago to predict where we would be in the first full week of August, I would have predicted that we would facing one of two situations:

Either the Nation would be confronting $2-plus gasoline prices, while Californians would be sweating in the dark amid ever-worsening blackouts...and the President's National Energy Plan would be under attack for being unresponsive to the immediate crises at hand.

Or alternatively, the Nation would be experiencing lower gasoline prices, Californians would be seeing fewer-than-expected blackouts...and everyone would be saying that the energy plan was dead, Congress wouldn't act on it, and that the Administration had overplayed its hand in claiming that there was an energy crisis.

But here we are today. Gasoline prices across America are lower, California is not suffering under recurring blackouts, and what is most remarkable – despite all that – Congress is still interested in doing something about energy.

There are 105 recommendations in the President's energy plan. Now I know most people think there is only one – opening up ANWR. But there are a lot more.

85 of them can be implemented administratively, and the Department of Energy – and many other federal agencies – are moving ahead to implement them.

The other 20 recommendations call for Congressional action.

Last week, the House of Representatives began debating an omnibus energy package designed to implement key elements of the President's energy plan.

The House leadership – led by Tom Delay – prodded four committees into action, producing four separate energy-related bills, moving them through the committee structure in a span of three days. That, itself, is quite remarkable.

Then the House Rules Committee combined the four bills into one 510-page consolidated package – designated HR-4 – which went to the floor last Wednesday.

Why the rush? Two reasons, I believe.

One is that despite the relative good fortune in recent weeks in terms of gasoline prices and power supplies, conventional wisdom on the Hill is that we aren't doing well on energy.

And two, because much of the public shares the same wisdom, Congress felt it was imperative to move an energy bill at least through the House before Members left for their districts during the August recess.

Now, there is a lot inside those 510 pages that needs some work – the bill is not perfect by any means – but at least it shows that Members were reluctant to confront their constituents unless they could tell them that they had taken some action on energy.

That means, for the first time in a long time, energy is back on the national agenda. And it's there NOT just because the Administration keeps calling attention to it, but because a large part of Congress knows that energy has become a grassroots issue – important not only to the overall economy and our national security, but to the day-to-day lives of individual citizens and consumers.

Perhaps – if we're lucky – this will allow the Nation to break out of the destructive energy cycle we seem to be in. Secretary Abraham says it's much like the movie Groundhog Day.

For those of you who saw it, remember that Bill Murray plays an surly Pittsburgh weatherman who gets snowed in while covering Groundhog Day in Punxsutawney, Pennsylvania. But when he wakes up on February 3rd, it's still Groundhog Day, and he relives it over and over again...and again...and again.

That's what's happening in energy. When the first alarms were sounded about an energy crisis, some people said it was an exaggeration – more the product of a hotly contested Presidential campaign than any intrinsic weakness in our energy system.

At the same time, the Department was predicting that this spring, gasoline prices would spike upward. Why? Because there WERE intrinsic weaknesses in our Nation's energy system – in this case, limited refining capacity that exacerbated the problem of low stock levels.

But the Department also predicted that after a period of time, prices would fall.

What happened? Spring came, prices spiked, and we had headlines like "3 Dollar-a-Gallon Gasoline Around the Corner," "Senators Warm Energy Crisis Could Triple US Power Costs," and "The Price of Power Skyrockets."

Calls were sounded for an investigation of the oil companies and a suspension of the gas tax. (That actually sounds like another movie – Casablanca – where Captain Renault [Louie] exclaims "Major Strasser has been shot...round up the usual suspects.")

Then, prices eased and many announced that the worst has passed. Newspapers changed their headlines to "Has the Madness Subsided?" and "What Crisis?"

Almost the same exact pattern happened last year. And you can be assured: like Bill Murray, we could see the same thing next spring. And the spring after that. And the spring after that.

There's a subtle difference, however. In the movie every Groundhog Day was exactly alike. But each time we go through another energy cycle, things get a little worse.

Some oil and gas wells that shut in never reopen. Some energy prices never quite go back to their earlier levels. And the Nation's pipelines, transmission lines, and refineries get a year older and more prone to problems.

Now in the movie, Bill Murray finally gets his act together. He begins to treat people better, and finally he gets the girl and wakes up to a brand new day.

Well now it's time for America to get its energy act together – and that's what I think is dawning on a lot of Members of Congress.

We're hopeful that some fundamental energy facts are becoming apparent. For example:

> **Our demand for oil in this country is projected to increase by 1/3rd over the next two decades. But we produce nearly 40 percent less oil than we did in 1970, and that downward trend is sure to continue unless we change course.**
>
> **Our demand for electricity will increase by 45 percent, owing at least in part to the growth of a power hungry, information-driven economy, but there are many people who want to see coal – which now supplies over half our electricity – go the way of whale oil.**

The demand for natural gas – the fuel most experts see supplying the great majority of that power – could rise by 62%, but 40 percent of our domestic gas resources are now off limits or subject to restrictions that make them virtually impossible to produce.

While transmission and distribution outages cost U.S. businesses nearly $120 BILLION dollars last year, there are currently plans for only a 4.2 percent increase in transmission lines over the next 10 years.

Put all of this together and the overall energy picture looks something like this (and because I am talking to a technical audience, I can use the term "quads"):

The Energy Information Administration estimates that in the next 20 years, the U.S. demand for energy could grow from today's 98 quads to 175 quads.

Now, we anticipate that the U.S. will continue to make great strides in conservation and energy efficiency – including improvements called for in the President's energy plan. And if all of these are implemented, it may be possible – underscore the word MAY – to reduce energy consumption by 48 quads.

I should point out, however, that to reduce energy use by this amount means that we will achieve energy conservation gains that exceed those of the last 10 years.

But let's say this is possible. That still leaves 127 quads of energy by the year 2020 that will be needed to keep our homes heated, our schools lit, and our factories running.

And please note, of the 98 quads of energy we consume today, 26 are imported, 72 are produced from domestic sources.

So even with robust, aggressive energy efficiency gains, we still face a shortfall of 29 quadrillion BTUs of energy.

And here is perhaps the most important number: during the past 10 years, as a country, we have increased domestic energy supply by guess how much? The answer: One quad.

Okay, now some people say here we go again....we're exaggerating the problem....trying to play up a political agenda, trying to make the point that we can't conserve our way totally out of our energy problems.

Some would tell you "so what if we fall a little short, say 2 or 3 or 10 quads of energy." That's a small amount compared to what our economy consumes. What difference will it make if we don't produce it?

Well, consider this: One quad equals the amount of natural gas required to heat 15 MILLION homes, or enough electricity to provide power to 28 million households. It's equivalent to the amount of gasoline needed to drive 171 BILLION miles.

In other words, this is an area where close isn't good enough. We will need every barrel of oil, or TCF of natural gas, or kilowatt of electricity we can produce or we risk the wellbeing of millions of individual homeowners and businesses.

That's why the President hasn't veered from the position that a balanced energy policy cannot just emphasize new incentives to conserve but also new incentives to produce.

So that brings us to the question of how fossil-renewable hybrid technologies fit into the President's National Energy Policy. I would suggest that there are three ways it fits.

First – when the President presented his energy policy on May 17, 2001, he placed at its core, a new emphasis on technological innovation. Improvements in the way we produce and use energy will be made NOT because of government mandates, but because government can help create a climate of technological creativity that encourages entrepreneurs and risk-takers.

When the President presented the guiding principles behind his climate change policy on June 11, 2001, again at the core was a faith in and commitment to technology.

Exploring the synergies between solar, wind, biomass, geothermal...and natural gas or coal-derived gas or landfill gas is exactly the kind of technological ingenuity that the President's energy plan has in mind.

Two, the President's plan recognizes that natural gas carries with it enormous advantages in terms of ease-of-use and environmental cleanliness. But the Plan also confronts the problems of counting on natural gas to fill virtually all of the foreseeable demands for power generation. It recognizes that increasing reliance on any single fuel – even natural gas – is not a desirable long-term energy strategy, so it sets a course for a better balance of many sources of energy.

Hybrids fill that bill, too. The discussions you will be having over the next two days could set the direction for research that brings more natural gas into our energy mix, but also expands the technology base in a way that avoids the dangers of over-confidence in its long-term availability.

Finally, the concept of hybrid energy systems fits the President's plan of maximizing efficiencies throughout the energy cycle. Hybrid technologies could be the key to getting the most from our available energy resources – using them to their peak effectiveness – relying on them at the right time and in the right place.

Woven throughout the President's energy policy is a recognition that we need to change the way we think about energy production and use. No longer should we be wedded solely to the "one-size-fits-all" philosophy of energy production.

We foresee a world of cleaner, more efficient, and in many cases smaller units of power generation. We foresee a world in which a diversity of energy resources and energy technologies are tailored to the specific circumstances or the specific location – where power is generated reliability both from central power plants and increasingly, from distributed energy systems.

We see a power industry that no longer relies on power flowing only one way – but instead, we see a two-way grid in which power is produced where it makes the most sense to produce it...and any surplus moves efficiently to where it is most needed.

The concept of hybrid systems fits very well into this vision.

Technology is driving a revolution in our economy. And technology is driving a revolution in how we produce and consume energy...and how we think about tomorrow's energy industry.

This workshop – and those of you in attendance – are on the cutting edge of this new thinking, and on behalf of Secretary Abraham and the rest of us at the Energy Department, we commend you for it.

Thank you very much for being here today.